# CHAPTER 4

## Board Gender Diversity and Banking Performance

**Overview**: In this chapter, we carry out the analysis for determining the impact of board gender diversity on the banking performance of commercial banks in India during 2015-2021. The Companies Act of 2013 stressed upon gender diversity in the board of management considering the significant role of women towards the success of an organization. Following it, both public sector and private sector banks in India implemented the act from 2015 onwards. In this study, we investigate whether its implementation has improved board gender diversity uniformly across public and private sector banks. Further we study the impact of board gender diversity on the performance of public sector and private sector banks in India.

### 4.1 Introduction

In the past twenty years, world have been witnessed a growing interest of public and research world in to the various concepts and techniques of cooperate governance. Additionally, researchers have look in to mechanism how they can ensure share holder interest are in line with the central and management plans (Burton (2000); Mallin (2001); Mueller (2006)). Research on corporate governance in banks have shown that the structure and characteristics of boards of directors' impact banking success. Researchers have lately explored the presence of a relationship between various aspect of corporate governance and bank performance. Some of these aspects include board independence (Gafoor et al., 2018); transparency and disclosure (Oino, 2019) and risk management (Harb et al., 2023). This interest is fuelled, in part, by the frequent occurrences of insufficient or overtly immoral management practices at the top of organizations and the losses that result for stakeholders and shareholders. From an agency paradigm, many strands of corporate governance and management study focus on the activities, structures, and makeup of the board and their impact on organizational outcomes.

According to Kang et al. (2007), heterogeneity among the board of directors' membership is called board diversity. It can be classified in two types of diversity. Namely, directly visible and less visible. Directly visible diversity includes nationality, age, gender and ethnic background. However, less visible diversity includes occupational background, functional and educational. From a 'logical' standpoint, diversity can be considered as a

'functional' property of a group of persons allocated to a specific shared activity (i.e. board). such functionality can lead to the increased knowledge base, creativity, and innovation, resulting in a competitive advantage for the company (Siciliano (1996); Simons and Pelled (1999); and Erhardt et al. (2003)).

Diversity on boards can improve information exchange, reduce uncertainty, help businesses approach resources more effectively, and eventually aid in the development of overall corporate strategy (Hillman &Dalziel, 2003). Additionally, a diverse board brings a variety of knowledge, innovation, and problem-solving talents to bank management. A varied group will generate a greater number of ideas, expanding the options for reaching an effective conclusion. As a result, variances in member qualities can help in decision-making (Adeabah et al. (2019); Bhat et al. (2019)). Gender, ethnic, and cultural diversity on the board of directors has emerged as one of the most significant governance concerns for modern business managers, directors, and shareholders. This has gained public attention as a result of popular press coverage, shareholder resolutions from advocacy groups, and policy declarations from big institutional investors (Carter et al.,2003). According to Carter et al. (2003), board diversity is crucial because it brings new and diverse viewpoints to issue solutions. Thus, board diversity has an impact on firm performance and value (Erhardt et al., 2003) because the unique characteristics that members bring to the board contribute to high-quality decisions, increased creativity and innovation (Cox and Blake, 1991), and improved problem-solving ability (Miller et al., 1998). The advantages of appointing female directors are generally associated with their personalities, communication styles, educational backgrounds, and professional experience and competence (Liao et al., 2014), all of which broaden the decision-making process. More crucially, female directors are more charitable and concerned with the common good than male directors (Adams & Funk, 2012). Furthermore, women are shown to be more devoted and active, more conscientious, and less self-interested, which improves decision-making and increases board effectiveness and business performance (Liao et al. (2014); Perez et al. (2014); Balasubramaniam et al. (2015)). Women with human capital, external networks, information, know-how, and other business-valued attributes deserve to participate on corporate boards and in senior management. Moreover, the gender and ethnic diversity of directors result in better governance, making the organization more profitable. Several studies support the concept that diversity on a board

can improve corporate governance and bank performance (Jebran et al., 2020). Diversity on boards enhances problem-solving, creativity, and knowledge in bank management.

Gender is undoubtedly the most longstanding and controversial aspect of board composition. Burke (2003), Zelechowski and Bilimoria (2004), and Stephenson (2004) all highlight the competitive advantages that organizations might get by having women on their boards of directors. They highlight women's intimate knowledge of consumer markets and customers, as well as their innovation while remaining socially and community concerned. In US-based studies by Kang et al.( 2007); Adams and Ferreira (2008), found that a combination of shifting social views and greater equality legislation appears to have had some influence on increasing women's participation on corporate boards. However, information from other developed countries is not encouraging. There is substantial evidence that women's engagement is viewed solely as a means of legitimizing internal and external stakeholders (Adams &Ferreira 2008). According to Liao et al. (2015), female directors make a significant and broader contribution to decision-making. Female board directors are more concerned and sympathetic than their male counterparts (Ramly et al., 2015). Women's dedication and involvement levels are strong, which improves decision-making processes. They are also observed to be less concerned with their own interests and work harder, increasing organizational effectiveness and performance (Liao et al., 2015; Pérez et al., 2015). Furthermore, female board members attend more meetings than male board members, and diversity improves the board's monitoring abilities (Adams & Ferreira 2009).

According to the Egon Zehnder Global Diversity Report 2022, women currently hold 18.7 % of board positions in corporate India, up 8.6% since 2012 (Table 4.1). India exceeds the Asian average (14.8%) but falls behind the world average (27%). Another indicator of diversity is the proportion of female board members. When compared to its Asian rivals and the world average, India leads. Women make up 20.8 percent of new board hires in India, compared to 20.6 percent in Asia and 17.2 percent internationally. Based on Egon Zehnder Report, 2022, 22.6 percent of female board leaders hold multiple seats, compared to only 12.8 percent of male board leaders. More women than males serve on several boards, highlighting the need for corporations to expand their hiring practices to include female talent. At the same time, women are underrepresented in senior positions on company boards. According to the research, women hold only 11 percent of committee chairs, compared to 27.3 percent internationally.

**Table 4.1: Women's Representation in Board**

| | Boards with at least 1 woman | Boards with at least 2 women | Boards with at least 3 women |
|---|---|---|---|
| India | 97.4% | 66.2% | 23.4% |
| Asia | 84% | 45.4 | 17.5% |
| Global | 84.2% | 78.3% | 60% |

**Source:** Egon Zehnder Report, 2022

In India, the Companies Act of 2013 emphasized gender diversity on the board of directors, recognizing the important role of women in an organization's success. The provisions of the Companies Act, 2013, mandatory for a minimum one-female board director of every public company with a paid-up capital of hundred crores Indian rupees or more, or a profit turnover of three hundred core Indian rupees or more, as of the date are the most recent audited financials. It is applied to the listed and unlisted companies in India. In this scenario, whether gender diversity on boards effects business performance becomes an essential study question—something that has yielded varied results in Indian settings.

In the following chapter, we have organized the content into several sections. Section 4.2 covers the development of the hypothesis, while Section 4.3 provides descriptive statistics. Section 4.4 illustrates the proportion of gender diversity in private sector banks and public sector banks in India. Additionally, Section 4.5 presents comparative results regarding the impact of gender diversity on banking performance, and Section 4.6 examines the effect of gender diversity on the entire Indian banking industry. Finally, Section 4.7 offers the conclusion.

## 4.2 Development of hypothesis

This section discusses the development of the various hypotheses which are tested in this chapter.

Many articles have examined the impact of board gender composition on business performance, with a few focusing on the banking performance (Adams and Mehran (2012); Garcia-Meca et al. (2015); Berger et al. (2014); Pathan and Faff (2013)), with conflicting results. Ongore et al. (2015), Shungu et al. (2014), and Pathan et al. (2013) discovered a favourable association between the representation of women on boards of directors and bank performance. Corporate governance researchers have emphasized the importance of increasing women's representation in top and middle management positions.

Empirical data has revealed that diversifying corporate entities improves the effectiveness of collective decision-making mechanisms (Aceituno et al. (2013); (Naciti et al.(2021); Martinez et al.(2019)). The presence of women on boards contributes positively to governance effectiveness, as women give diverse approaches and typically mitigate risks. Banks with female board members had lower risk profiles due to their conservative approach and focus on stability (De Cabo et al.(2012); Sánchez et al.(2015)). According to agency theory, better supervision of managers is associated with a diverse board since diversity increases board independence (Carter et al.,2007). Furthermore, the participation of women enhances the bank's reputation by assuring consistent and non-discriminatory governance practices (Pascual et al., 2018).

The studies conducted by Ahern and Dittmar (2012), Adams and Ferreira (2009), Kilic (2015), found a negative relationship between gender diversity and bank performance. Gender diversity has a significant negative impact on business value because of forced gender quotas, according to research by Ahern and Dittmar (2012). The forced changes to the boards itself, regardless of the qualities of the directors, caused the boards to become dysfunctional. Adams and Ferreira (2009) discovered that female directors with a stricter monitoring style can reduce shareholder value and that the more different directors are, the more likely they are to disagree and cause board conflict. According to Kilic (2015), the low number of female directors on boards is another reason for the growth in this adverse relationship. Furthermore, differing styles, attitudes, and viewpoints can worsen conflict, reduce cohesiveness, and hamper team communication and coordination (Jhunjhunwala & Mishra, 2012). Conflicts can impede decision-making, negatively impacting competitive environments (Álvarez et al., 2010). Gender diversity might lead to more confusion, miscommunications, and poor decisions (Randøy et al., 2006).

Meanwhile, Liang et al. (2013) find that there is no significant association between the proportion of women on the board of directors and their performance. Since, the female directors are viewed as tokens and lack the authority to influence decisions, gender-diverse boards could not make any impact on company performance (Miller & Triana, 2009). For example, a token woman may feel marginalized in the decision-making process and unable to express her ideas and opinions, contrary to expectations (Grosvold et al., 2007). We explore this topic using a freshly generated annual dataset on bank directors and financial performance, and we offer the resolution to these conflicting finding. The hypothesis tested for addressing this gap is

***$H4_a$:*** Board gender diversity of Indian banking industry is positively associated with banking performance.

### 4.3 Descriptive statistics

Table 4.2 shows the descriptive analysis. The mean ROA, ROE, and Tobin's Q are 0.39, 0.40 and 0.20 respectively. ROA varies from -67.52 to 21.33 and ROE varies from -72.59 to 24.30. Meanwhile Tobin's Q varies from 0.01 to 5.71 indicating that banks' profitability measures vary widely. The average for board diversity (GENDER) is 0.16, with a low of 0.01 and a high of 0.23. The findings suggest that banks in India are dominated by male directors. This low participation of female directors on boards is consistent with other research conducted in India (Rafinda et al.(2018); Dankwano and Hassan, (2018); Maji and Saha (2021))

**Table 4.2: Descriptive statistics.**

| Variables | Minimum | Maximum | Mean | Standard Deviation (S.D) |
|---|---|---|---|---|
| ROA | -67.52 | 21.33 | 0.39 | 6.04 |
| ROE | -72.59 | 24.30 | 0.40 | 18.06 |
| TOBQ | 0.01 | 5.70 | 0.20 | 0.36 |
| BGD | 0.01 | 0.23 | 0.16 | 0.06 |
| INDE | 0.90 | 8 | 0.56 | 0.57 |
| B.SIZE | 5 | 20 | 9.57 | 2.42 |
| MEET | 2 | 12 | 5.42 | 1.54 |
| MCP | 1.95 | 5.92 | 4.18 | 0.74 |
| LEV | 0.01 | 3.29 | 0.09 | 0.24 |
| SIZE | 3.07 | 6.99 | 5.39 | 0.60 |
| GDP | -7.4 | 8.30 | 5.87 | 5.20 |
| INFL | 3.3 | 6.60 | 4.60 | 1.02 |

**Source:** Author's calculation

#### 4.3.1. Correlation Analysis

Before performing a regression analysis, we test for multicollinearity by using the Pearson correlation. Table 4.3 displays the correlation matrix results, which exhibit a low correlation between the explanatory variables. As a result, multicollinearity does not create an issue for the regression analysis.

The general assumption is that the simple correlation coefficient value should be less than 0.9; otherwise, multicollinearity becomes a big concern for the dataset. (Mayers, 1990 cited in Goswami et.al, 2019). As this matrix contains no values of more than 0.8 or 0.9, we may conclude that multicollinearity is not a serious concern in this data set.

**Table 4.3: Correlation matrix;**

| **Variables** | ROA | ROE | TOBQ | BGD | IND | B. SIZE | MEET | MCP | LEV | SIZE | GDP | INFL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROA | 1 | | | | | | | | | | | |
| ROE | .194** | 1 | | | | | | | | | | |
| TOBQ | .146** | .081 | 1 | | | | | | | | | |
| BGD | -.089 | .076 | -.070 | 1 | | | | | | | | |
| IND | .353** | .116 | 116 | .681** | 1 | | | | | | | |
| B. SIZE | .161* | .041 | .004 | .057 | .191* | 1 | | | | | | |
| MEET | -.398** | -.120 | -.088 | -.629** | .776** | -.161* | 1 | | | | | |
| MCP | .241** | .058 | .365** | -.066 | -.037 | .191** | -.037 | 1 | | | | |
| LEV | .031** | -.059 | .748** | -.108 | -.021 | .046 | .046 | .229** | 1 | | | |
| Size | .009 | -.033 | -.011 | -.133 | -.323** | .281** | .323** | .758** | .008 | 1 | | |
| GDP | .101 | .20f2 | .047 | -.079 | .028 | .150* | -.009 | .060 | .015 | -.061 | 1 | |
| INFL | .081 | -.151* | .117 | -.025 | .057 | .067 | -.093 | -.097 | -.083 | .051 | .667 | 1 |
| VIF | 1.57 | | | | | | | | | | | |

**Source:** Author's calculation

We also checked for the Variance Inflation Factor (VIF) multicollinearity. Gujarati (2003) states that the standardised value of VIF for each variable must be less than 5, and that a tolerance level close to zero indicates no multicollinearity. VIF less than 10 indicates that there is no major multicollinearity concern. Since this matrix contains no values bigger the 5, multicollinearity is not a significant issue in this data set. We noticed that VIF in our data set ranged from 1.01 to 3.17.

### 4.4 Analysis of gender diversity

Table 4.4 depicts the board gender diversity of public and private sector banks using Blau's based on the yearly average values of BI for each bank from 2015 to 2021. The results suggest that gender diversity of the board is gradually improving in both public and private sector banks. In the case of public sector banks, it has risen from 0.13 in 2015 to 0.17 in 2021 and from 0.19 to 0.22 in case of private sector banks. This indicates that board gender diversity in private sector banks is greater than that in public sector banks in India.

Secondly, the highest BI values have remained quite low over the years. A higher value of BI indicates greater board diversity. In Table 4.4, the highest value of 0.23 is seen in case of private sector banks in 2021. It implies that the proportion of women on boards is quite low in India. In other words, the representation of women in the board is not adequate.

**Table 4.4: Board gender diversity in banks**

| Year | Public bank (BI) | Private BANK(BI) |
|---|---|---|
| 2015 | .13 | .19 |
| 2016 | .12 | .18 |
| 2017 | .12 | .18 |
| 2018 | .14 | .19 |
| 2019 | .15 | .15 |
| 2020 | .14 | .21 |
| 2021 | .17 | .23 |

**Source:** Author's calculation

**Table 4.5: Diagnostic test**

| **Diagnostic test** | **ROA** | **ROE** | **Tobin's** |
|---|---|---|---|
| Breusch–Pagan test for heteroscedasticity | Chi2= 1.77 | Chi2= 2.02 | Chi2= 7.59 |
| | P= 0.0776 | P=.0462 | P= .000 |
| Endogeneity for Wu–Hausman test (Beyer 2002) | Chi2= 2.75 | Chi2= 5.45 | Chi2=28.7 |
| | P= .096 | P= .019 | P = .000 |
| Arellano-Bond test (1995) for Autocorrelation | P= .2358 | P= .6118 | P=.6599 |
| Frees' test for Cross-section dependence | P= .7678 | P= .7678 | P= .7678 |

**Source:** Author's calculation

Table 4.5 shows the results of the various diagnostic tests. The Breusch-Pagan test and Wu–Hausman test discovered the existence of heteroskedasticity and endogeneity respectively. Whereas, the Arellano-Bond test and The Frees' test demonstrates that there is no second-order serial correlation and cross-sectional dependence respectively. The occurrence of these issues shows that the GMM is better suited for our data. Furthermore, our data set shows that N is bigger than T, indicating that the GMM model is suitable for estimation.

### 4.5 Regression Analysis for comparison

Table 4.6 presents the results of GMM estimation of Model 1 for public and private sector banks. The GMM model's requirements are met as the Sargan test results show that instruments are not correlated with residuals. Since the null hypothesis is not rejected, sargan test demonstrates that model is strong by using numerous instruments. In other words, it proves that the model is valid over identifying restrictions in the tests. Furthermore, it found there is no evidence of first-order or second-order autocorrelation. Since AR (1) and AR (2) found to be insignificant respectively.

**Table 4.6: SGMM Estimation (Dependent variable ROA)**

| **Public sector banks** | | | **Private sector banks** | | |
|---|---|---|---|---|---|
| **ROA** | **Coefficient** | **Z- value** | **ROA** | **Coefficient** | **Z- value** |
| BI | 0.038 | 2.70*** | BI | .009 | 1.83** |
| INDE | -8.042 | -14.60*** | INDE | 1.021 | 16.90*** |
| B.SIZE | 0.004 | 3.25*** | B.SIZE | 0.0002 | 1.11 |
| MEET | 0.597 | 8.57*** | MEET | -0.075 | -13.21*** |
| MCP | 0.071 | 4.01*** | MCP | 0.005 | 2.34** |
| LEV | 0.091 | 6.81*** | LEV | 0.037 | 3.60*** |
| SIZE | 0.183 | 6.52*** | SIZE | 0.016 | 2.34*** |
| GDP | -0.023 | -20.30*** | GDP | 0.047 | 17.21*** |
| INFL | -0.110 | -21.60*** | INFL | -0.029 | -8.61*** |
| Lag ROA | 3.500 | 17.30*** | Lag ROA | 0.379 | 22.70*** |
| Sargan test | -0.142 | | | 0.159 | |
| AR(1) | -0.034 | | | 0.1361 | |
| AR(2) | 0.819 | | | 0.744 | |

**Source:** Author's calculation

***indicates significant at 1 percent;**indicates significant at 5 percent; * indicates significant at 10 percent

From, table 4.6, it is observed that the coefficient of BI is positive and significant in explaining the accounting-based measure ROA. The results indicates that BI is a significant determinant of bank performance for both public and private sector banks. The positive co-efficient of BI suggests that improvement in BI would lead to an increase in bank performance.

This is consistent with the agency theory and resource dependency theory that having women on boards increases business performance. The results are in line with empirical evidence from Saggar et al.(2022); Sanan (2016); Duppati et al.(2020). According to the resource dependence theory, the favourable relationship states that because women have administration abilities and financial and geographical experience, they assist the business in obtaining a competitive advantage in the worldwide marketplace through corporate risk

disclosures. Additionally, their capacity for problem-solving pushes them to convince investors that they are adequately prepared to handle any type of threat by releasing risk information to shareholders. Taking cues from personality traits, the literature attributes women's nature, i.e. being more compassionate, empathic, and concerned about others, as the underpinning for assuring increased corporate risk disclosure. This indicates that having women on the board of directors increases the firm's value and that having a gender balance is essential for establishing a better board that enhances the firm's performance. Firms that follow the practice of hiring female directors on boards are more ethical. This helps them to be known as respectable and trustworthy firms(Landry et al., 2016).

The findings support our research hypothesis showing that, regardless of challenges involved with board gender diversity in the Indian context, such heterogeneity at the board level brings a favourable impact on the outcomes by addressing various banking industry needs.

Next, we consider the impact of board diversity on ROE. ROE is more unstable to shift happening in the corporation world as it deals with shareholders' funds. For instance, banks often increase their capital by attracting as many deposits as possible before issuing higher-interest-rate loans. In theory, if bank capital was completely risk-adjusted, ROE might be an accurate performance indicator for bank shareholders(Christophe & Arthur, 2011). So, in order to have a better understanding, we include ROE along with ROA in measuring the accounting performance of a bank.

**Table 4.7: SGMM Estimation (Dependent variable ROE)**

| **Public sector banks** | | | **Private sector banks** | | |
|---|---|---|---|---|---|
| **ROE** | **Coefficient** | **Z- value** | **ROE** | **Coefficient** | **Z- value** |
| BI | -0.523 | -4.03*** | BI | 6.20 | 19.15*** |
| INDE | -1.84 | -28.70*** | INDE | -1.77 | -7.72*** |
| B.SIZE | -0.049 | -3.45*** | B.SIZE | 0.001 | .05 |
| MEET | 1.944 | 25.60*** | MEET | -0.001 | -.72 |
| MCP | -0.462 | -3.52*** | MCP | -0.079 | -2.46** |
| LEV | -0.461 | -4.49*** | LEV | -0.684 | -2.98*** |
| SIZE | -0.888 | -4.03*** | SIZE | 0.948 | 18.2*** |
| GDP | -0.490 | -22.20*** | GDP | 0.013 | 15.5*** |
| INFL | -2.200 | -14.30*** | INFL | 0.047 | 7.67*** |

| | | | | | |
|---|---|---|---|---|---|
| Lag ROE | 3.915 | 18.20*** | Lag ROE | 0.174 | 7.31*** |
| Sargan test | 0.090 | | | 0.050 | |
| AR(1)_ | 0.017 | | | 0.003 | |
| AR(2) | 0.182 | | | 0.264 | |

**Source:** Author's calculation

***indicates significant at 1 percent;**indicates significant at 5 percent; * indicates significant at 10 percent

From table 4.7, it is observed that the coefficient of BI shows significant effect on ROE. But the direction of influence varies depending on the ownership structure. BI has a negative and significant impact on ROE of public sector banks, but a positive and significant impact on private sector. According to the tokenism theory, it may be difficult for female members to have a meaningful impact on the decision-making and idea-generation processes of banks if their participation on the board is small (Kanter, 1977). In such cases, male members see them as tokens and refuse to enable females to make significant decisions (Kilic, 2015). The difference in the impact of board gender diversity in ROE of public and private sector banks can therefore be explained by the variation in the percentage of women present on the board in both public and private sector banks. In table 4.4, we saw that gender diversity is lower in public banks than in private As the BI is greater in private-sector banks, it has a favourable and significant impact on the ROE. We can conclude that businesses with a larger proportion of female directors had better ROE, which is consistent with the resource dependency hypothesis, which emphasizes the competitive advantage firms get by including more women (Dankwano and Hassan (2018); Zahoor(2016); Terjesen et al.(2009); Campbell and Vera,(2008)) Furthermore, female directors improve board effectiveness, which improves business financial success. The results indicate that increasing the proportion of female directors on the Board would have a positive effect on ROE, confirming that women can truly improve business financial performance. Furthermore, previous research by Dankwano and Hassan (2018); Julizaerma and Mohamad (2012); Thi et al. (2015) and Low et al.(2015)found similar outcomes.

In the case of ROE, the findings support our research in the case of private sector but failed to do so in the case of public sector banks.

Additionally, we check the impact of gender diversity on a market -based performance indicator of bank.

**Table 4.8: SGMM Estimation (Dependent variable Tobin's Q )**

| **Public sector banks** | | | **Private sector banks** | | |
|---|---|---|---|---|---|
| **Tobin's Q** | **Coefficient** | **Z- value** | **Tobin's Q** | **Coefficient** | **Z- value** |
| BI | -.0689 | -3.74*** | BI | -.069 | -12.5*** |
| INDE | -.0001 | -3.18*** | INDE | -.0001 | -3.18*** |
| B.SIZE | .0002 | .29 | B.SIZE | .0002 | .29 |
| MEET | -.0008 | -76 | MEET | -.0008 | -.76 |
| MCP | -.0022 | -2.16** | MCP | -.002 | -2.16** |
| LEV | -.0174 | -5.05*** | LEV | -.017 | -5.05*** |
| SIZE | .0310 | 10.9*** | SIZE | .031 | 10.9*** |
| GDP | -.0009 | -1.99** | GDP | -.0009 | -1.99** |
| INFL | -.0014 | -10.6*** | INFL | -.0014 | -10.65*** |
| Lag TOBQ | .4533 | 12.53*** | Lag TOBQ | .4533 | 12.53*** |
| Sargan test | 0.042 | | | .035 | |
| AR(1) | 0.011 | | | .043 | |
| AR(2) | 0.119 | | | .264 | |

**Source**: Author's calculation

***indicates significant at 1 percent;**indicates significant at 5 percent; * indicates significant at 10 percent

In this study, Tobin's Q is used as a proxy for the market performance of Indian banks. Table 4.8 shows that the coefficient of BI has a negative and significant impact on Tobin's Q. The negative coefficient of BI indicates that improvements in BI will lead to decreases in bank performance in both public and private sector banks. It implies that gender diversity on bank board's cannot be used to leverage for market performance of banks in India. If companies place more emphasis on meeting quotas than on the effectiveness of board directors, the company's performance is going to decline. Furthermore, if the enterprises are unable to fulfil that requirement, they will relocate to another country. It will have an unfavourable impact on market performance. The mere fulfilment of the demand for a female quota could lead to younger and less experienced boards, increased leverage and acquisitions. It worsens in operating performance, all of which are associated with less competent boards (Duppati et al., 2020). In the table 4.4, we can observe the that the BI index in banks remains relatively low. It suggests that banks are appointing women

directors to the board in order to comply with SEBI standards rather than to achieve board diversity. The study of Joecks, Pull, and Vetter (2013), states that gender diversity, and company performance follow a U shape. Gender diversity initially has an unfavourable impact on banking performance and is only correlated with greater firm performance after reaching a 'critical mass' of roughly 30 percent of women. We can observe that the percentage of women on the board is less than 30 percent in Indian banking sector. As a result, board gender diversity has a negative influence on Tobin's Q. The findings are sufficient to reject our null hypothesis.

These findings suggest that gender diversity on influences future firm outcomes. However, results are consistent with research describing the double-edged nature of diversity (Triana et al., 2014), with some studies finding that diversity have favourable impact and other studies finding that it does no. It can negatively influence the future outcomes. It depends on the socio culture nature of the country of the firm. Here we can see that ROA of both banks reacts positively in the board gender diversity. But ROE of public banks reacted negatively towards implementation of board gender diversity of India. Meanwhile ROE of private banks reacts positively. Since it based on the value of equity. Times of India commissioned study in 2014 on the relation between companies with women on their boards and profitability. The study found that private sector company's board, led by a professional CEO and comprised of. both men and women, contributed to a 4.4 percent increase in ROE over the previous year in 2014. This company's ROE increased by 1.8 percent throughout the same period, although it had a men-only board. Additionally, Tobin's Q reacts negatively towards the board gender diversity through the Companies Act 2013. It indicates that investors respond negatively towards on women in board. Even though heterogenous board promote diverse perspectives, experiences, and insights to decision-making, the socio-cultural factors are influencing the attitude of investors and it led to reduction their share value. Even while Western ideas and lifestyles have progressively permeated Asian cultures, not everyone views gender equality as "progress." In some cultures, male dominance remains firmly ingrained, and the goal of equality sometimes means treating people differently rather than the same (Philipps, 2009). Developing countries have seen high impact of impacts from tokenism and stereotype threat. The degree of socioeconomic growth reflects the degree of modification made to traditional normative frameworks (Low et al. 2015)

The variance of the impact of gender diversity on both private and public sector banks may be due to other firm and board variables. Since that board gender diversity does not affect firm financial performance in isolation, but rather in combination with other board and firm characteristics.

In the case of the control variables, market capitalization has a considerable and positive influence on explaining ROA of public and private sector banks. Market capitalization is one of the most reliable ways to calculate a company's value. It is critical for customers to understand that a company's valuation is dependent on its shares. This is a general approach for calculating a company's market value. It allows investors to easily compare the performance of several banks. This comparison not only helps to comprehend a company's growth, but also the danger connected with investing in it. It will eventually have a positive influence on the performance and profitability of banks. At the same time, it has a significant and negative influence on explaining ROE and Tobin's Q in the both private and public banks cases.

Furthermore, leverage has a significant and negative impact on explaining both ROE and Tobin's Q in both cases. It implies that the greatest risk associated with excessive financial leverage arises when a bank's return on assets does not surpass the interest on the loan, resulting in a considerable loss in the company's return on equity and profitability. In contrast, leverage has a large and positive impact on comprehending ROA in both cases. One of the financial indicators used to assess a company's ability to pay its creditors is the leverage ratio. It will provide a clear view of the company's financial status and motivate managers to act profitably.

The size of banks has a significant and favourable influence on explaining all indicators of private sector banking profitability as well as ROA and Tobin's Q of public sector banks. Because when the bank expands in size, it may profit from economies of scale. It will result in decreased overhead expenses and, as a result, better financial performance. The size of banks has a significant and negative influence on explaining the ROE of public sector banks. The percentage of income-generating assets to total bank assets would boost bank interest revenue. When NPAs increase, the proportion of assets producing interest decreases, resulting in lower interest revenue and ROE.

The board's independence has a strong and negative influence on nearly all indicators of public sector banking profitability, as well as ROE and Tobin's Q of private sector banks.

The findings indicated that insiders are the most successful directors because they have more information about the business than outsiders, and hence outside directors must rely on them to make decisions. In addition, many outside directors may be inadequate to do their given obligations because they are part-time workers with little inside understanding of the organization. Meanwhile, board independence has a beneficial influence on the ROA of private sector banks.

The size of the board had no influence on all metrics of private-sector bank performance. The number of meetings held had no impact on ROE and Tobin's Q of private sector banks. But in the case of ROA, the number of meetings held shows negative and significant impact. The number of board meetings held has a significant and positive impact on ROA and ROE of public sector banks. Meanwhile, board size and meeting frequency have no significant effect on Tobin's Q of public sector banks. Board size has a strong and beneficial influence on public sector bank ROA. At the same time, it has a negative impact on ROE. It implies that smaller boards may have held meetings more regularly compare to larger boards. When the board has more independent directors, they can work more efficiently since they are good at overseeing and advising. Moreover, independent directors are less politically connected.

GDP is significantly and negatively connected to all performance metrics of public sector banks and Tobin's Q of private sector banks. It implies that excessive GDP growth will rise inflation rate of the economy, which authorities like the government and central bank attempt to control by increasing interest rates. Rising interest rates slow the economy and have a direct and immediate impact on the majority of financial markets. The GDP growth rate has a large and favourable influence on explaining the ROA and ROE of private sector banks. Growth in gross domestic product (GDP) denotes economic expansion. Banks may raise interest rates if GDP expands in order to keep inflation under control, boosting corporate profitability. It improves the performance of banks.

Inflation has a significant and unfavourable influence on all performance measures of public sector banks and ROA and Tobin's Q of private banks. It suggests that enterprises may automatically boost their pricing to account for growing production costs. In times of rising prices, banks can enhance their profits. This profit, however, may be lowered if their cost of capital rises. Meanwhile, the inflation coefficient is demonstrated to be significant and favourable in explaining the ROE of private sector banks. It suggests that banks adjust

interest rates in reaction to the pace of inflation in the economy. As a result, revenues will expand faster than costs, increasing profitability.

The model demonstrates that the lag value of banking performance indicators in both the private and public sectors is large and positive. This means that banks will keep an adequate portion of their profits in the coming year. This increases the bank's solvency and liquidity. Furthermore, the bank may spend the surplus funds in a variety of profitable enterprises to generate further profits. This would boost the bank's earning potential in the future.

### 4.6 Regression Analysis for Indian banking sector

Table 4.9 presents overall results of SGMM estimation for impact of board gender diversity on Indian banking performance. The following results are grouped into three section to show the effect of board gender diversity on these separate measures of Indian banking performance: ROA, ROE, and Tobin's Q.

The GMM model's requirements are met as the Sargan test results show that instruments are not correlated with residuals. Since the null hypothesis is not rejected, sargan test demonstrates that model is strong by using numerous instruments. In other words, it proves that the model is valid over identifying restrictions in the tests. Furthermore, it found there is no evidence of first-order or second-order autocorrelation. Since AR (1) and AR (2) found to be insignificant respectively.

**Table 4.9: SGMM model for listed commercial banks**

| **ROA** | **Coefficient** | **Z-value** |
|---|---|---|
| BI | 1.36 | 8.55*** |
| INDE | 1.58 | 7.44*** |
| B.SIZE | -.022 | -3.86*** |
| MEET | -012 | -20 |
| MCP | .165 | 2.12** |
| LEV | -193 | -2.31*** |
| SIZE | -.309 | -2.64*** |
| GDP | .031 | 16.35*** |
| INFL | .053 | 6.62*** |
| Lag ROA | 1.23 | 5.52*** |

| | | |
|---|---|---|
| Sargan test | .325 | |
| AR(1) | .084 | |
| AR(2) | .536 | |
| **ROE** | **Coefficient** | **Z-value** |
| BI | 9.38 | 12.27*** |
| INDE | -5.10 | -5.11*** |
| B.SIZE | -.029 | 1.33 |
| MEET | -1.83 | 10.1*** |
| MCP | .793 | 2.43** |
| LEV | .705 | 4.07*** |
| SIZE | 1.45 | 4.16*** |
| GDP | -.080 | 16.0*** |
| INFL | -157 | -5.15*** |
| Lag ROE | .702 | 25.71*** |
| Sargan test | .05 | |
| AR(1) | -.0032 | |
| AR(2) | .2643 | |
| **Tobin's Q** | **Coefficient** | **Z-value** |
| BI | -.023 | -2.18** |
| INDE | .252 | 11.61*** |
| B.SIZE | -.001 | -2.16** |
| MEET | -.017 | -2.28** |
| MCP | -.026 | -3.78*** |
| LEV | .034 | 6.77*** |
| SIZE | .042 | 3.36*** |
| GDP | .001 | 9.12*** |
| INFL | .004 | 3.96*** |
| Lag TOBQ | .016 | 3.78*** |
| Sargan test | .290 | |
| AR(1) | .0004 | |
| AR(2) | .4911 | |

**Source:** Author calculation

***indicates significant at 1 percent;**indicates significant at 5 percent; * indicates significant at 10 percent

From, table 4.9, it is observed that the coefficient of BI is significant and positive in explaining the accounting-based measure ROA and ROE. This is consistent with agency theory and resource dependency theory that having women on board increases business performance and line with the findings of Maji and Saha (2021).This indicates that having women on board of directors fostering inclusive decision-making, improving customer engagement, ensuring regulatory compliance, enhancing risk management practices, promoting talent development, challenging social norms, and enhancing brand reputation. This will increase the banking performance. However, coefficient of BI is negative and significant in explaining the market-based measure Tobin's Q. The negative coefficient of BI shows that improvements in BI will cause decreases in bank performance in India. It suggests that gender diversity on the board may result in conflicts, making decision making less efficient and time consuming(Jadah et al., 2016). In India, highly rooted societal conventions and cultural expectations can hinder women directors' ability to assert themselves in male-dominated boardroom environments. They may struggle to be heard, earn respect, or exert influence, limiting their ability to impact constructive change. Moreover, traditional stakeholders, like as shareholders, executives, and employees, may have biases against women in leadership roles. Resistance or pushback from these stakeholders can creates a negative impact in banking performance. Thus, we accept our hypothesis in case of accounting indicators of Indian banking performance.

The findings support our research hypothesis, indicating that, despite the challenges caused by gender diversity in India, having such diversity at the board level offers positive performance effects by meeting key business objectives in the case of ROA and ROE. However, in case of Tobin's, Q we are rejecting null hypothesis

### 4.7. Conclusion

This study investigated if the implementation of the Companies Act 2013 has led to an improvement of board gender diversity uniformly across public and private sector banks in India. We found that board gender diversity has been gradually improving in the Indian banking sector since 2015. The impact of board gender diversity on the performance of both public sector and private sector banks is found positive in India. However, board diversity in public sector banks appears to be lower than in private sector banks in India.

According to our findings, the extent of influence of gender diversity on banks differs depending on bank ownership structure. The findings indicate that both public and private banks exhibit positive impact in the case of ROA and negative impact on the case of Tobin's Q. Meanwhile, ROE reacted differently to the board gender diversity of both types of banks. ROE is sensitive to even the smallest fluctuations in the boards.

In addition, it was seen that public sector banks had lesser female directors than private sector banks. We believe it to be the cause of the disparity in our results. Despite the prevalence of male directors on India's large corporate boards, existing female directors have a keen eye on behaviour and different perspectives in decision-making. This creates a significant impact in the perspective of investors. As a consequence, empirical findings support the implementation of female quotas on company boards as per the Companies Act of 2013. Meaningful change in the realm of gender diversity has started showing itself in certain parts of corporate India. As India still tends to be a parochial society, it may lead investors to have negative attitude towards women presence in board. This in turn has a negative impact on market performance of banks. The Companies Act of 2013 was a key step toward boosting gender diversity in Indian boardrooms. While it did result in an increase in the number of women on boards, establishing a balanced and truly diversified representation remains a work in progress that will necessitate ongoing efforts, cultural changes, and proactive measures from both companies and regulatory agencies. The result of our studies shows that gender in board have significant impact in banking performance. But the direction of impact varies affected by board characteristics of the banks, social culture of the country, economic development of countries etc.

The findings of this study support the argument that female directors significant impact firm financial performance. The results are line with previous studies (Adams et al.(2015); Duppati et al.(2020)). Previous literature has already found many evident and reasons that support the favourable relationship of board gender diversity on firm. For example, gender-diverse boards improve the corporate governance structure ((Carter et al., 2003); (Sanan, 2016)) diligent monitoring and diverse perspective in decision-making ((Maji and Saha, 2021) ; (Owen and Temesvary, 2018)) enhance the corporate image (Rovers, 2013); greater access to information and network (Taljaard et al., 2015); Furthermore, based on the conceptual foundation, the findings of this study align with resource dependence and agency theories. Gender diversity has a favourable relationship on banking performance.

Meanwhile, board diversity shows a negative impact on Tobin's Q of both banks and ROE of public banks. The results are line with previous studies Triana et al. (2014). This negative relationship between board gender diversity and bank performance is explained by many reasons. For example, gender diverse boards will create problems and conflict between board members (Rovers, 2011), Strict control can be perceived as a hindrance, as it often hampers productivity. (Adams and Ferreira, 2009), increased expenses as a consequence of heightened firm's turnover and leave (Cox and Blake, 1991). From this theoretical base, the finding of this results are consistent with tokenism theories which gender negative impacts on firms performance.

Anti-discriminatory arguments about the representation of women in positions of power significantly influence political discourse (Klarbach, 2014). On the other hand, because of inconsistent and frequently contradictory results in previous studies, concerns persist about the financial impact of gender diversity on boards**.** The results pertaining to the relationship between gender diversity and the performance of banks may have significant implication for organizations, shareholders, managers, and legislators. As in other developed and developing nations, India's regulators and policymakers are steadily working to implement stronger corporate governance practices. Since the number of female directors are very low. It may create tokenism in the Indian banking sector. By increasing the number of women practitioners, female board directors, and independent women directors, the impact of tokenism and nepotism in the Indian context can be limited. Indian history illustrates the conservative mindset towards women, with male dominance prevailing in Indian society. Despite this, the gender heterogeneity in the board and workforce contributes significantly to the firm's financial performance. As a result, banks should place a greater emphasis on such diversity to achieve better performance. There are a few limitations present in the study. This study narrows the sampling by considering only listed public sector and private sector banks in a one-country context. It may not represent the entire banking performance of the country, as the Indian banking sector has a strong presence of foreign banks and rural regional banks. The researcher did not address important factors such as the impact of directors' nationality, age, experience, specific capabilities, and education in the study. It solely focused on the effect of directors' gender and its consequences on banking performance.